

**AMENDMENTS TO THE CLAIMS:**

Amend the claims as follows:

Claims 1-42. (Canceled)

43. (Currently Amended) A method for identifying compounds that modulates adipocyte differentiation, wherein (i) a test compound is contacted with a population of genetically modified pre-adipocyte cells comprising a recombinant nucleic acid coding a *REV-ERB ALPHA* receptor and (ii) adipocyte differentiation of said cells is measured or determined, allowing identification of compounds that modulate adipocyte differentiation, said *REV-ERB ALPHA* receptor comprising SEQ ID NO:4.

Claim 44. (Canceled)

45. (Previously Presented) A method according to claim 43, wherein the test compound is contacted with cells overexpressing the *REV-ERB ALPHA* receptor in the presence of at least one activator of the PPAR GAMMA receptor.

46. (Previously Presented) A method according to claim 43, wherein the test compound is contacted with cells overexpressing the *REV-ERB ALPHA* receptor in the presence of at least one activator of a receptor involved in the adipocyte differentiation process, which is selected in the group consisting of thiazolidinediones, N-(2-benzoylphenyl)-L-tyrosines and 15-deoxy-delta 12,14-prostaglandin J2.

47. (Previously Presented) A method according to claim 43, wherein the test compound is contacted with cells overexpressing the *REV-ERB ALPHA* receptor in the

presence of at least one activator of a receptor involved in the adipocyte differentiation process, which is selected in the group consisting of rosiglitazone, troglitazone, englitazone, ciglitazone, pioglitazone, KRP-297

Claims 48-51. (Canceled)

52. (Currently Amended) A method according to claim 43, wherein the recombinant nucleic acid comprises sequence SEQ ID NO : 3 ~~or a fragment thereof~~.

53. (Previously Presented) A method according to claim 43, wherein the recombinant nucleic acid further comprises sequence SEQ ID NO : 1 or a fragment thereof comprising sequence SEQ ID NO : 2.

54. (Previously Presented) A method according to claim 43, wherein the recombinant nucleic acid is incorporated in a plasmid vector.

55. (Previously Presented) A method according to claim 43, wherein the recombinant nucleic acid is incorporated in a viral vector.

56. (Previously Presented) A method according to claim 43, wherein the recombinant nucleic acid is integrated in the cellular genome.

57. (Previously Presented) A method according to claim 43, wherein adipocyte differentiation is measured (i) by staining the differentiated cells, (ii) by determining fatty acid transport or synthesis, or (iii) by determining the expression of at least one marker specific of differentiated adipocytes.

58. (Previously Presented) A method according to claim 43, wherein differentiation is measured or determined in step (ii) is compared with adipocyte differentiation of said same pre-adipocyte cells in the absence of said test compound.

Claim 59. (Canceled)

Claim 60. (Canceled)

61. (Currently Amended) A genetically modified pre-adipocyte cell, wherein said cell comprises a recombinant nucleic acid coding a *REV-ERB ALPHA* receptor, said recombinant nucleic acid further comprising sequence SEQ ID NO : 1 or a fragment thereof comprising sequence SEQ ID NO : 2 said *REV-ERB ALPHA* comprising sequence SEQ ID NO:4.

Claim 62. (Canceled)

63. (Currently Amended) A cell according to claim 61, wherein the recombinant nucleic acid comprises sequence SEQ ID NO : 3 ~~or a fragment thereof.~~

64. (Previously Presented) A cell according to claim 61, wherein the recombinant nucleic acid is incorporated in a plasmid vector.

65. (Previously Presented) A cell according to claim 61, wherein the recombinant nucleic acid is incorporated in a viral vector.

66. (Previously Presented) A cell according to claim 61, wherein the recombinant nucleic acid is integrated in the cellular genome.

Claim 67. (Canceled)

68. (Currently Amended) A method for preparing a pre-adipocyte cell according to claim 61, wherein a recombinant nucleic acid comprising a region coding a *REV ERB ALPHA* comprising sequence SEQ ID NO:4 and one or more transcriptional regulatory regions[[receptor]] is introduced into a pre-adipocyte cell..

69. (Previously Presented) A method according to claim 68, wherein the pre-adipocyte cells are selected from among the cell lines 3T3-L1, 3T3-F442A, ob17 and ob1771.

70. (Previously Presented) A method according to claim 68, wherein the nucleic acid is introduced by transfection with a plasmid vector.

71. (Previously Presented) A method according to claim 68, wherein it comprises cotransfecting the cells with a plasmid vector comprising said recombinant nucleic acid and a plasmid vector comprising an antibiotic resistance gene, and wherein the cells are selected for their resistance to said antibiotic and for their expression of said recombinant nucleic acid.

72. (Previously Presented) A method according to claim 68, wherein the nucleic acid is introduced by transfection with a plasmid vector additionally comprising an antibiotic resistance gene and a eukaryotic origin of replication, and wherein the cells are selected for their resistance to said antibiotic and for their expression of said recombinant nucleic acid.

73. (Previously Presented) A method according to claim 68, wherein the nucleic acid is introduced by infection with a viral vector.

74. (Previously Presented) A method according to claim 68, wherein the nucleic acid is introduced by infection with a recombinant adenovirus or retrovirus.

75. (Currently Amended) A method according to claim 68, wherein the recombinant nucleic acid comprises SEQ ID No : 3 ~~or a fragment thereof~~.

76. (Previously Presented) A method according to claim 68, wherein the recombinant nucleic acid additionally comprises one or more transcriptional regulatory regions, typically a transcriptional promoter and/or terminator.

77. (Currently Amended) A method according to claim 68, wherein one transcriptional regulatory region of the recombinant nucleic acid ~~additionally~~ comprises ~~[[the]]~~ sequence SEQ ID NO : 1 or a fragment thereof comprising the sequence SEQ ID NO : 2.

78. (Previously Presented) A method according to claim 68, wherein, after infection or transfection, stable pre-adipocyte cell lines in culture are selected.

Claim 79. (Canceled)